

**Publications Requirements  
Department of the Army Technical Manual Requirements**

1. PREPARATION INSTRUCTIONS. Contractor shall deliver Department of the Army Technical Manuals (DATMs), and Electronic Technical Manuals (ETMs) in accordance with guidance below. You shall deliver an ETM for each DATM. Each manual will have Draft Equipment Publication (DEP), Final Draft Equipment Publication (FDEP), and Final Reproducible Copy (FRC) deliveries. Each manual shall follow the instructions below:
  - a. Draft Equipment Publication (DEP). For DEP deliveries, Contractor shall provide complete publication(s), that is, a validated draft DATM. DEP manual(s) shall be representative of the final product. DEP copies shall be reproduced double-sided, collated and assembled, with each copy drilled for standard three-hole punch. See paragraph 5, below, for ETM requirements.
  - b. Final Draft Equipment Publication (FDEP). For FDEP deliveries you shall provide complete publication(s), that is, final DATMs. FDEP shall include all changes and final resolutions resulting from our reviews and tests as well as Contractor quality reviews and final edits. FDEP manual(s) delivery shall include:
    - (1) Two paper copies of each final publication, each reproduced double-sided, collated and assembled, and drilled for standard three-hole punch.
    - (2) Final Reproducible Copy (FRC) for DATMs, shall be single-sided reproducible pages, collated and ready for one-to-one reproduction. FRC pages produced from a 600 dot-per-inch laser printer or photo mechanical of original master paste-up boards are acceptable. The intent is to receive crisp, clear, reproducible pages without paste-up, ready for one-to-one reproduction without additional work or loss of quality due to handling or storage.
2. SPECIFICATIONS. The specifications shown below shall be used for guidance. Contractor shall respond to the latest version at date of award. Copies can be obtained from the government contracting officer.

MIL-STD-40051-2    Preparation of Digital Technical Information for Page-Based TMs

MIL-HDBK-1222C    Guide to General Style and Format of US Army Work Package TMs
3. CLARIFICATIONS.
  - a. Noise hazard WARNINGS related to noise hazards shall be included in TMs if 85 dB9A noise level is exceeded during operation of equipment and tools and/or performance of procedures. NOTE: DO NOT include any Class I Ozone Depleting Chemicals (ODCs) or reference to ODCs in the manuals.
  - b. All illustrations shall be line drawings.
  - c. Illustrations in operation and maintenance procedures shall be isometric and provide a view as seen by user. Illustrations shall appear on same or facing page as applicable text; quantity

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and type of illustration shall allow user to locate items and operate and maintain equipment in an accurate and efficient manner.

- c. Incorporate appropriate lubrication instructions into the Operator and Unit Preventive Maintenance Checks and Services (PMCS) at the applicable hard-time intervals IAW MIL-STD-40051-2 , Appendix E, para. E.5.3.4.2.3.1b. Army Oil Analysis Program (AOAP) will not apply.
- d. Prepare an operator/crew PMCS IAW MIL-STD-40051-2, Appendix E, para. E.5.3.4. The operator/crew checks and services must only require common tools which are included in the Basic Issue Item's furnished with and stored on the vehicle during operation. Operator/crew PMCS will include intervals such as; before, during, after, weekly and monthly, as applicable.
- e. Prepare a Unit PMCS containing Unit level tasks IAW MIL-STD-40051-2, Appendix E, para.E.5.3.4. The Unit PMCS will include intervals such as; Quarterly, Semiannually or annually.
- f. Develop and update a Maintenance Allocation Chart (MAC) IAW MIL-STD-40051-2, Appendix G, paras G.5.3.4., and figures G-4, G-7, and G-8. The MAC shall be organized by Tank-Automotive Functional Group Codes per TB 750-93-1 and in major assembly/subassembly sequence to conform with MIL-STD-40051-2, Appendix G, para. G.5.3. Contractor shall update the MAC throughout the performance period of the contract, including results of your analysis, vehicle testing, validation, verification and review manuals. Contractor shall perform an analysis to identify the extent of repair for each potentially repairable item and recommend the maintenance level to perform the work within the Army Maintenance System (AR 750-1, chapter 3, section 3, paragraphs 3-8 through 3-11) can be found at the following WEB address:

[http://www.army.mil/usapa/epubs/750\\_Series\\_Collection\\_1.html](http://www.army.mil/usapa/epubs/750_Series_Collection_1.html)

Variables such as item price, parts prices, failure rates of the repairable item, and piece parts, labor costs, and the cost of special tools and equipment shall be considered.

- g. Prepare Components of End Item (COEI) and Basic Issue Items (BII) lists IAW MIL-STD-40051-2, Appendix G, para. G.5.4 and figure G-10.
  - h. Prepare Additional Authorized List (AAL) IAW MIL-STD-40051-2, Appendix G, para. G.5.5 and figure G-12.
  - i. Prepare an updated, revised Appendix A, References: see MIL-STD-40051-2, Appendix G, para. G.5.2 and figure G-1.
  - j. Contractor shall reference existing DA equipment publications (i.e., pumps, filter separators, fuel nozzles), when possible, to avoid duplication of system component information, unless components are unique to equipment configuration.
4. NATIONAL MAINTENANCE WORK REQUIREMENTS (NMWRs)
- a. The NMWRs shall include inspection procedures, overhaul procedures, mandatory replacement parts list, and any refurbishing instructions. The contractor shall provide a list

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of maintenance procedures either published in an Army TM or new maintenance procedures not yet published. The maintenance procedures shall also include information on replacing or upgrading testing/diagnostic sensors, final testing procedures and packing and preservation procedures. The new maintenance procedures will be added to the proper maintenance manual(s) or included in the NMWR(s).

- b. The NMWRs shall also include the technical rebuild standards, inspections, machining standards, and testing procedures. Pre-shop analysis for sub-components, if required, shall also be developed and included in the NMWRs.
- c. The data developed from the analysis of each NMWR component candidate shall be included in each NMWR. The contractor shall prepare the NMWRs using the following specifications and standards:
  - (1) MIL-STD-40051-2 w/Change 1 dated 12 May 2006, Subject: Department of Defense (DoD) Standard Practice - Preparation of Digital Technical Information for Multi-Output Presentation of TMs.
  - (2) National Maintenance Point rebuild standards will be numbered IAW Supplement 1 to AR 25-30, dated 15 July 1993, Subject: The Army Integrated Publishing and Printing Program, paragraph 2-77I(l). NMWRs will use the "N" prefix in lieu of the "D" prefix for Depot Maintenance Work Requirements.
- d. The government reserves the right to combine all selected components into one NMWR for this vehicle series.

### 5. ELECTRONIC TECHNICAL MANUALS (ETMs):

- a. The Contractor shall develop a separate Electronic Technical Manual (ETM). This ETM will be based on the approved FDEP DATM. The Contractor shall use the portable document exchange system Acrobat (Adobe Systems Acrobat Version 4.0 or higher) pdf. These files will not have any linking done, but they shall be editable and searchable.
- b. Contractor shall create editable files (Microsoft Word, FrameMaker, PageMaker, or RTF files) containing all the text of the ETMs. The contractor will also create Computer Graphics Megafile (CGM) or Consultative Committee on International Telephony and Telegraphy (CCITT) Group 4 files or Tag Image Format Files (TIFF) containing all graphics/line drawings of the ETM.
- c. Contractor shall deliver the Acrobat ETM on International Organization for Standardization (ISO) 9660 CD-ROMs. Deliver the separate editable files and graphic files on separate ISO 9660 CD-ROMs.
- d. Contractor shall provide Government with validated ETM and paper Final Draft Equipment Publication (FDEP) in accordance with the CDRLs. The Contractor, at no additional charge to the Government, shall correct all errors discovered by the Government during Verification or by the Contractor during Validation. All changes to the equipment configuration shall be accurately reflected in the ETM DATMs at no additional cost to the Government.
- e. Contractor shall provide Government with final draft ETMs concurrent with the final draft

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DATMs. All errors discovered by the Government or Contractor during validation, verification and reviews shall be corrected by the contractor at no additional charge. All changes to the equipment configuration shall be accurately reflected in the ETM, DATMs at no additional cost.

### 6. QUALITY ASSURANCE.

- a. Contractor shall be responsible for the quality of the DATMs, and ETMs and for developing effective processes to develop, test and inspect the deliverables, ensuring technical accuracy, usability, completeness (within the scope of the contract), consistency and generally meet contract requirements prior to delivery. ANSI/ISO/ASQC Q9001 may be used as guidance.
- b. Validation is a process where Contractor must physically perform one hundred percent of the procedures developed to support the vehicle configurations being procured. Validation is an action performed on text and illustrations developed to meet contract requirements; therefore development and validation of data CANNOT be done simultaneously. Validation also includes Contractor's comparative review of all other technical data to the configuration of the item being procured. The validation effort shall assure that both text and illustrations are mutually supportive and accurately describe, reflect the vehicle configurations being procured.

The Government reserves the right to perform reviews and testing (Verification) for accuracy and usability at our discretion prior to acceptance of the final deliveries. Verification is the Government's hands-on performance check of tasks and deliveries to check the adequacy of your preparation and Validation efforts. The Government's Verification will be held after the Contractor delivers the Draft manual to us. The Government's Verification will include a review of the DATM.

The Contractor shall support the Government Verification by providing the appropriate personnel. A pre-determined location will be agreed upon. The Contractor will provide the Equipment and all necessary hardware and support equipment that will be required during the Verification.

The Government will evaluate the TMs for compliance with contract requirements to determine acceptance of the TMs. All information in the TMs must be presented in such a way that it can be easily identified and found; read and understood; and includes illustration support where the Government deems necessary.

If the Government finds errors or deficiencies in the Contractor's deliveries during Government reviews or testing, Contractor shall correct them at no additional cost to the Government.

- c. The Contractor shall support In-Process Reviews (IPRs) by providing samples of work accomplished to date or other requested data and identify improvements to the manuals, or QA process required as a result of IPR comments. The Government may choose to witness Validation of the DATMs and ETMs.

### 7. GOVERNMENT FURNISHED INFORMATION (GFI).

- a. The Government will provide the following: TM numbers, the end items NSN (if available)

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and official nomenclatures, distribution statements (information required on the covers Contractor shall prepare).

- b. The Government will furnish updated Army regulations and TM numbers and titles to be included in Appendix A, References.

REFERENCE. Contractor is invited to use the military performance standard, MIL-STD-40051-2 w/Change 1 dated 12 May 2006, for guidelines and examples of the TM content and format that meet Army requirements. The cited MIL-STD is not mandatory, except for portions specifically included or identified in this contract. The referenced standard, MIL-STD-40051-2, is a single book with a main general section and seven appendixes. The all-inclusive standard includes information on technical manual preparation and assembly and introductory, theory, operator, troubleshooting, maintenance, repair parts and special tools lists and supporting information previously contained in numerous, separate, detailed specifications and standards. See MIL-STD-40051-2 TM Requirements Matrix Attachment.